



Avaya IP Deskphone Key Expansion Module User Guide

Avaya Communication Server 1000

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About the Key Expansion Module (KEM)

This document describes the Avaya IP Deskphone Key Expansion Module (KEM) and how to use it with the IP Phone 2002 and IP Phone 2004.

Description

The IP Deskphone KEM is a hardware component that connects to the IP Phone 2002 and IP Phone 2004 and provides additional line appearances and feature keys. See Figure 1 on page 8.

The IP Deskphone KEM provides 24 additional line/feature keys (with labels) for your IP Phone 2002 or IP Phone 2004. The IP Deskphone KEM keys are displayed in two columns of twelve keys on either side of a central Liquid Crystal Display (LCD).

Up to two IP Deskphone KEMs can be attached to an one 2002 or IP Phone 2004. With two IP Deskphone KEMs attached, the IP Phone can have up to 48 additional line/feature keys.

Note: The IP Phone 2004 also supports up to 48 additional line/feature keys using **Shift** key functionality with one IP Deskphone KEM. The IP Phone 2002 does not support the **Shift** key functionality.

When an IP Deskphone KEM is installed on an IP Phone 2002 or IP Phone 2004, the controls on the IP Phone affect both the IP Phone and the IP Deskphone KEM.

Figure 1: IP Deskphone KEM



Features

The IP Deskphone KEM has the following features:

- 12 keys on each side of an LCD provide up to 24 additional self-labeled line/feature keys. Using the **Shift** key functionality, an IP Phone 2004 can have up to 48 additional logical line/feature keys.
- A desk-mount bracket and structural baseplate connect the IP Deskphone KEM to an IP Phone 2002 or IP Phone 2004, or to another IP Deskphone KEM.
- A wall-mount bracket installs the IP Deskphone KEM alongside a wall-mounted IP Phone 2002 or IP Phone 2004.

Adjusting the display

The IP Deskphone KEM (see Figure 1 on page 8) has 1 LCD between 2 rows of 12 line/feature keys for a total of 24 keys. Each key has a 10-character display label that is set automatically. Use the controls on the IP Phone to edit the label.

To alter the display contrast on the IP Deskphone KEM, use the **Contrast Adjustment** option under the **Telephone Options** menu on the IP Phone. Any contrast changes you make on the IP Phone affect the IP Deskphone KEM. The IP Deskphone KEM and IP Phone do not have separate contrast adjustments.

For more information on IP Phone settings and controls, see the *IP Phone 2002 User Guide* or the *IP Phone 2004 User Guide*.

Setup and assembly

The IP Deskphone KEM mounts on the right side of an IP Phone 2002 or IP Phone 2004 as shown in Figure 2. Secure the KEM by snapping it into a receptacle on the back of the IP Phone using the desk-mount bracket and structural baseplate supplied with the IP Deskphone KEM.

The IP Deskphone KEM connects to the IP Phone 2002 or IP Phone 2004 using the Accessory Expansion Module (AEM) port on the IP Phone.

Figure 2: IP Deskphone KEM connected to IP Phone 2002



Installing the KEM

Use the following instructions to install an IP Deskphone KEM:

1. Remove the IP Phone from the stand by pressing the IP Phone tilt handle, and pulling the IP Phone away from the stand.

Note: For the IP Phone 2004, you can optionally adjust the stand angle to maximum, instead of removing the stand.

2. Place the connecting arm of the IP Deskphone KEM behind the IP Phone and align the IP Deskphone KEM connection plug to the AEM port on the back of the IP Phone.

Note: An IP Phone 2002 with the product code NTDU76AB34, NTDU76BB34, NTDU76AB70, or NTDU76BB70 has shorter connector pins than an IP Phone 2002 with another product code. If your IP Phone 2002 has a shorter connector pin, you must detach the ribbon cable connector in the IP Deskphone KEM from the retaining clip and press the ribbon cable connector into the header connector before you attach the IP Deskphone KEM.

3. Press the IP Deskphone KEM and IP Phone firmly together until the IP Phone KEM locks into place.
4. If connecting a second IP Deskphone KEM, repeat steps 2-3.

Note: The second IP Deskphone KEM is attached to the right side of the first IP Deskphone KEM.

5. Attach the IP Phone stand and the IP Deskphone KEM stand, if removed. Adjust each IP Deskphone KEM stand to the same angle as the IP Phone.

The IP Deskphone KEM powers up.

Note: The IP Deskphone KEM uses the electrical connection of the IP Phone 2002 or IP Phone 2004 for power. It does not have its own power source.

Using the wall-mount option

The IP Phone and IP Deskphone KEM combination can be wall-mounted using the optional bracket kit provided.

Adjusting the tilt base

The tilt base for the IP Phone 2002 cannot be adjusted; however, the tilt base on the IP Deskphone KEM can be adjusted to match the fixed angle of the IP Phone 2002.

The IP Phone 2004 has an adjustable tilt base. Adjust the tilt of both the IP Phone 2004 and the IP Deskphone KEM as desired.

Initializing the KEM

Once the IP Deskphone KEM has been installed and powered up on your IP Phone 2002 or 2004, the IP Deskphone KEM initializes. When this occurs, the IP Deskphone KEM display lights up and flashes until it establishes communication with the IP Phone. When initialization is completed successfully, the additional line/feature keys on the IP Deskphone KEM are ready to use.

Note 1: If the IP Deskphone KEM display does not stop flashing or does not display key labels, contact your system administrator.

Note 2: If you install two IP Deskphone KEMs on your IP Phone, the one directly attached to the IP Phone (to the immediate right of the IP Phone) must be functional for the second IP Deskphone KEM to operate. This is because the second IP Deskphone KEM uses the first IP Deskphone KEM to receive its power and communicate with the IP Phone.

Controls and settings

When an IP Deskphone KEM is installed on an IP Phone 2002 or IP Phone 2004, the controls and settings of the IP Phone control both the IP Phone and the IP Deskphone KEM. Use the **Telephone Options** menu on the attached IP Phone to set the contrast and feature key labels of the IP Deskphone KEM.

For more information about controls and settings (including the **Telephone Options** menu) for your IP Phone, see the *IP Phone 2002 User Guide* or the *IP Phone 2004 User Guide*.

Shift key functionality

The IP Phone 2004 supports the **Shift** key functionality that enables a single IP Deskphone KEM with 24 physical keys to support 48 logical keys. However, if two IP Deskphone KEMs are attached to an IP Phone 2004, the **Shift** key functionality is disabled on the IP Deskphone KEM. The maximum number of additional line/feature keys remains at 48 (24 keys on each IP Deskphone KEM).

The IP Phone 2002 does not support the **Shift** key functionality. Therefore, to access the maximum of 48 additional line/feature keys on an IP Phone 2002, you must install two IP Deskphone KEMs.

Terms you should know

Accessory Expansion Module

A built-in port on an IP Phone 2002 and IP Phone 2004 that enables accessory components (such as an IP Deskphone KEM) to connect and communicate with the IP Phone.

Directory Number (DN)

A one- to seven-digit number assigned to a system telephone.

Feature display

An area that shows status information about the feature in use. It also displays the name and status of the active session.

IP Deskphone Key Expansion Module

A hardware expansion module that provides 24 additional 10-character, self-labeled keys for your IP Phone 2002 or IP Phone 2004.

Soft keys (self-labeled)

A set of keys programmed by your system administrator. The four keys located directly below the display area have four programmable layers. Access the layers through the [More...](#) key. The soft keys are also used to configure parameters in the [Telephone Options](#) menu.

User-defined Feature Key Labels

The six keys located at the sides of the upper area of the display on the IP Phone. On the IP Deskphone KEM, the Feature Key Labels display in the LCD in the middle of the IP Deskphone KEM.

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